Everyday innovative words can be enhanced to the terminology of a certain language, and English in particular, via word-formation processes including compounding. Compounding is generating a new word from words already present and of course with meaning derived from its components, which is sometimes much apart from that of the original components. Words, necessarily, are created to satisfy and fit specific purposes. For instance, the word Frigidaire is known as a compound noun by joining the adjective frigid with the noun air. Thus, compounds are written in various ways either with dashes, spaces, or nothing between the individual words. The present study aims to shed light on compounding as a productive process of word-formation processes, and to identify the performance of Iraqi EFL learners in this process. The study is based on a test designed by the researcher, and has been validated by exposure to a jury of experts in the field. Reliability is estimated by adopting the Kurder-Richardson method. The test consists of (20) items to test recognition of the types of compounds and (20) items to test production of the compounds. The test is administered to (30) students selected randomly from second year students at the Department of English in the College of Education/Ibn Rushd for the academic year 2016-2017. The data has been analyzed statistically. Percentage and one way analysis of variances measure the students’ performance in compounding. The results come to reject the null hypothesis and prove positively the students’ recognition and production of compounding.

Key words: Compounding, word-formation processes, and productive process of compounding.
Introduction

In many world languages in general and English in particular, so many words may be made from words previously found in the language, by the process of compounding. Individual words are adjoined, to result in a compound word as in *sweetheart* or *feedback*. Compounding is the most productive processes of word–formation. The significance of each compound depends, slightly, on its parts as in *blackboard* whereas many compounds do not seem to imply the meanings of their individual parts as in *jack-in-a-box;* a tropical plant. Some of the compounds’ meanings may be figured out as in *turncoat* which means a traitor. For language students, the study of compounding can greatly foster their language, and support their language accumulation by learning so much vocabulary through acquiring the rules of producing new compound words out of the existing individual ones.

Theoretical Background

**Compounding**

It is identified as the process of conjoining two forms, in fact, free morphemes to coin an innovative term mostly a noun, a verb, or an adjective. Compounds are usually inscribed as one term *homework* and at times as two hyphenated words *cross-eye*, and on other occasions as two dispersed words *football stadium* (dictionary.cambridge.org/us/dictionary/English/compound).

Linguists consider compounding in English as the most productive kind of word-formation processes. There are certain sorts of compounds in English namely:

“Compound Adjective, Adverb, Noun, Tense, Verb, and Exocentric Compound, Rhyming, Suspended, Root, Synthetic. Compounds are often thought of as to be consisted of two components, although these components may consist of more than one element themselves. For some types of compounds with three or more components, for instance copulative compounds, a non binary structure has been suggested as in; *bathroom towel-rack* and *community cent refinance committee*. Actually, compounding process is limitless in the English language: For example, a term similar to *sailboat*, we may simply coin the compound *sailboat rigging*, from which we may further make "*sailboat rigging design, sailboat rigging design training, sailboat rigging design training institute, and so on.*” Akmajian et al. (2001).

Basically, two words that are most often established as united in one word regarded as a compound, frequently begin as a type of cliché, e.g. *backbiter long face*. If the connotation resists that unification, the two terms frequently go into a compound, typically with a sense
that is just the summation of the words (e.g. pickpocket), occasionally with some type of rhetorical common sense, such as honeymoon. The semantic affiliations of the constituents may be wholly of sorts: “a window cleaner cleans windows, but a vacuum cleaner does not clean vacuums”. Accordingly, we may be satisfied we have a compound, when the main stress changes onward; habitually a modifier will be less seriously tensed than the term it modifies, but in compounds the first component is continuously more deeply strained.” (Kenneth G. Wilson, The Columbia Guide to Standard American English. Columbia University Press, 1993).

**Distinctive Features of Compounds**

In fact, a derivative is set up by connecting a word with a bound morpheme, like a prefix or a suffix. It can be equated to a compound word which is a grouping of words. For illustration, Backache and filmgoer are considered instances of compound words. (www.teachingenglish.org.uk/article/compound-word), and who stipulates the category of the whole word inmost compounds is the rightmost morpheme. Accordingly, lighthouse is regarded as a noun for its rightmost constituent is a noun. Homemade is a verb, since the word made also goes to this group, and worldwide is an adjective fair as wide is an adjective. Thus, English orthography is not compatible on behalf of compounds that are often used as only single words, occasionally with an overriding hyphen, and from time to time as isolated words. In relation to pronunciation, though, there is a significant simplification to be prepared. Adjective-noun compounds, in particular, are represented by a supplementary protuberant stress on the first constituent.

Another distinctive characteristic of English compounds is that plural markers and tense cannot be closed to the initial component, though they can be attached to the compound as in one piece. Yet there are certain exemptions, as in "passers-by and parks supervisor". (William O'Grady, et al., 2001).

**Compounds Plural**

Compounds, in general, restrict to the common regulated rule in joining the suffix -s inflection to their latest component, yet the subsequent two compounds are remarkable in captivating the inflection on the main constituent, as in:

"passer-by/passers-by,

A limited number of compounds completed in-full regularly proceed the plural -s inflection on the latter component, but have fewer mutual plurals with the suffix -s inflection on the head part, as in the following examples:
mouthful/mouthfuls or mouthsful, spoonful/spoonfuls or spoonsful", (ibid).

Compounds which end in ‘-in-law’ permit the plural both on the initial component or casually on the final one, as in the following examples;

"daughter-in-law/sisters-in-law or daughter-in-laws", (ibid).

**Compounds Interpretation**

Questions of interpretation can be handled from two opposite perspectives. From a semasiological perspective, the meaning of a compound comes from the interpretation of a given form. From an onomasiological perspective, the meaning precedes the formation, in meaning that a form is chosen to name a specific concept. The basic question in the interpretation of compounds is how to relate the two components. The scope of possible interpretations can be constrained by the rules of compounding, by the semantics of the components, and by the context of their use. (https://www.collinsdictionary.com/dictionary/english/compounding).

**Compounds as Different Parts of Speech**

In compounds’ widest sense, words are frequently moulded, when two or more are combined to set up a different meaning in the new word, from either the original or the sum of the meanings of their own parts. Compounds can serve in various parts of speech, which state the form that the compounds may proceed on. In this instance, the term ‘carry over’ is used as a verb, when it is an open compound word. When it is closed it can be used as a noun and as an adjective.

This surplus will carry over to next season;"
"The extra supplies were part of the carryover from the budget". (www.k12reader.com/term/compound-words).

Clearly, words that are considered compound in the English language are widespread. We do not even deliberately use them until when we have to employ them in writing. At that time we frequently need to break and consider their (henceforth 'compound words' is CWs) composition.
Types of CWs

There are three types. They are frequently in more than one category. The following kinds of CWs can each be seen with an illustration and instances:

Closed CWs

They are moulded when two equal words are set together. There is no space between them and they are just the kind that usually flashes in concentration when we contemplate of CWs, as in:
1. I like reading the billboard ads.
2. Be careful at crossroads.
3. She used to order milkshake.
4. News of the attack attracted worldwide attention?
5. Precious watches used to be waterproof. (www.grammarly.com/blog/open-and-closed-compound-words).

Open CWs

These are words combined through using a space between them and an innovated meaning is expected, when they are read together, for instance;
1. If you go camping, you'll surely need a gas lamp.
2. Until recently, people who lost a parent used to wear a black arm card
3. To call German from a telephone box in the UK you need an international phone card.
4. The car park is behind the church, you can't miss it.
5. The ‘night mail’ is a beautiful poem by W. H. Auden. (www.grammarly.com/blog/open-and-closed-compound-words).

Hyphenated CWs

They are linked via a hyphen. To evade misunderstanding, adapting compounds are frequently hyphenated, particularly as soon as they go before a noun, as in “part-time teacher, high-speed chase, and fifty-metre land”. When they come after the noun they are open compounds: a chase that is high speed, a teacher that is part time, and so on. Comparative and superlative adjectives are hyphenated when compounded with other modifiers: the highest-priced watch, the lower-priced computer. Adverbs that end in –ly and are compounded with another modifier, are not modified: a highly rated restaurant, a publicly held meeting”. (www.k12reader.com/term/compound-words). Some CWs originally had a hyphen, but as they turned more common, the hyphen was no longer used. For instance, blackbird used to have a hyphen in the 1800s, but today it does not. Whereas it can be uneasy
to decide whether or not to put a hyphen, there are a few rules to follow. Firstly, CWs, when they come before a noun, should be hyphenated, i.e. a well-behaved kid or an up-to-date fashion. Secondly, CWs should be hyphenated when two nouns fall together to form a verb e.g. to roller-skate. Finally, one should hyphenate made-up CWs used in creative writing, as in; She worked up a sweat and became a hot-facer (study.com/academy/lesson/hyphenated-compound-words-examples.html).

Other CWs can be used with or without a hyphen, as in the case with build-up or buildup and walk-through or walkthrough. At this point, we may find more instances of hyphenated CWs, such as the following sentences:

1. Warm-up is a common activity in communicative classes.
2. He used to go to self-service restaurants.
3. Mrs.Jackson is a well-respected woman.
4. "Some over-the-counter drugs can have serious side effects",
5. "If you are concerned for your well-being make sure you eat healthy foods and do plenty of exercise",(study.com/academy/lesson/hyphenated-compound-words-examples.html).

**Differences between compounds and phrases**

It is probably difficult to determine whether a particular structure should be dealt with as a compound or a free phrase. The distinction between compounds and phrases lies in the fact that whereas compounds are naming units, phrases are "units of syntax whose main function is to join signs for the sake of description" (Kavka & Štekauer, 2006). The problem is that the distinction between compounds and phrases is somehow obscure and there are certain criteria for differentiating between compounds and free phrases.

**Spelling**

In fact, the spelling of compounds in English is very incompatible and as a result, it cannot be considered as a practical criterion for the identification of these formations.

**Stress**

It is used to determine a compound. The presumption concerning stress is that the basic stress in compounds should be on the left-hand constituent, while syntactic phrases used to be stressed on the right hand constituent (Kavka & Štekauer, 2006). Nevertheless, there are some exceptions to this rule. For instance, a number of compounds, especially compound adjectives have double-stress (ibid).
The stress pattern of adjective compounds generally has more variation than that of nominal compounds (Adams, 1973). Accordingly, with respect to many compounds, the stress criterion is of no use. Adams (1973) indicates that this is specifically the case for adjectival sequences consisting of the combination adverb + adjective or participle, where the stress pattern of both compounds and phrases of this combination is the alike. (Adams, 1973: 90). The stress is on the first element frequently when an adjective compound is in an attributive position. When it is in a predicative position, the final element is regularly stressed (ibid). Sometimes, the semantic value of a compound is an important aspect in stressing compounds, because stress can be categorized according to the importance that the speaker ascribes to the specific constituents of a compound (Kavka and Štekauer, 2006).

**Syntactic criteria**

Scholars have developed certain syntactic criteria for demarking compounds from phrases. Firstly, it is the uninterruptability of a compound. This means that it is impossible to insert other elements between constituents of a compound, or to interrupt those constituents by a pause (Adams, 1973:7). Secondly, compounds should be inflected as a whole, i.e. the inflectional morphemes should be attached to the right-hand constituent (Kavca and Šteakauer, 2006:59). Yet, there are still exceptions to this rule, e.g. compounds which make both elements plural, as in men-servants, or compounds in which the first element is a lead noun who paved the way for a modifying adjective to follow on the Latin pattern, as in court martial – courtsmartial (Adams, 1973: 8). According to another criterion, the constituents of compounds have a fixed order, and switching the order of their constituents would result in altering their meaning or damaging it altogether (Kavka & Štekauer, 2006: 58).

Generally speaking compounds are supposed to be more specific in meaning than phrases (Kavka & Štekauer, 2006: 24). Jespersen (1974: 137) indicates that "we have a compound if the meaning of the whole cannot be logically deduced from the meaning of the elements separately." Accordingly, Kavka and Šteakauer (2006: 23) define compound as a unification of two or more words "which has a total meaning different from that of simple words in a free syntactic combination". The exceptions to this rule are very rare, e.g. absobloominlutely. Adams (1973:8) (https://is.muni.cz/th/358465/fss_b/bachelor_thesis.pdf).

**Pedagogical Implications**

Truly, learning word meanings is an important issue, which is involved with learning compounds and in most CWs, the ended word conveys utmost the linguistic meaning. So therefore, the last, right-most word is the lead of the compound. In the instance tree house, the lead is house. The head includes the basic meaning of the word, implying the category of semantic (a sort of house) and as well the grammatical type (a noun). Then, the modifier
expounds (*tree* modifies *house*). It is essential in teaching pupils to comprehend this instruction: Keep telling them that the last term in several CWs designates the group, (https://vocablog-plc.blogspot.com/p/compounds). So; according to:

- "A *doghouse* is a kind of house but a *house dog* is a kind of dog",
- "A *sandstorm* is a kind of storm but a *storm cloud* is a kind of cloud", and
- "A *sandbox* is a kind of box but *quicksand* is a kind of sand", (ibid).

Context is also important in grasping the meaning of any given compound. For instance a "goldfish" for anyone can think it is a fish that may be made of golden metal rather than grain (or muscles).

However, many CWs may not be understood easily just through seeing the last word (leadless compounds). For instance, A "pickpocket" isn't a kind of pocket and a *bulldozer* does not doze" (ibid). Lacking an interior word core to their meaning, we had better ask for exterior and overt context evidences, or we will need to consult a dictionary.

So many researchers like Ebbers (2008) show that the utmost communal kind of word domestic in the reading texts and subsequent-score science, is compounds. It is supposed that the way compounds express meaning cannot intuitively be understood via school-age children. Depending on previous researchers like Nagy, Berninger, Abbott, Vaughan, and Vermeulen (2003) revealed that the tested 195 at-risk readers and writers didn't instinctively comprehend noun-noun compounds (*e.g. the noun – noun compound is 'barnyard'). Another example, when students exposed to a portrait of grass within bees and asked to choose between two selections, the other graders were as appropriate to call the portrait grass "grass bee" as they were to appeal to name it "bee grass" (the test as well comprised the reverse query: "Which is a better name for the bees who live in the grass?""). Correspondingly, 14 questions of that type were introduced. At-risk second graders properly replied to 52% of the items and at-risk fourth graders appropriately answered 72% of the items. So, over two years, it becomes obvious that advancement in interpreting CW structure exists, however, confusion would not be handled no matter how long time it takes.

A newly correlated investigation showed that Chinese-speaking pupils in fifth grade caught an advantage, when learning how compounds of English were activated, as compared to compounds of Chinese (Zhang et al., 2010). Through training, the involvement grouping attained important goals away from the control grouping in perceiving together Chinese and English CWs.

An examination of how CWs are built to express connotation, offers the chances to imply the notion when reading, writing, speaking, and listening.
Aimed at primary grades for instance, a two-column flip-book may contain compounds that end in house for instance: "lighthouse, boathouse, birdhouse, bathhouse, farmhouse, playhouse, tree house, greenhouse, dollhouse, doghouse, firehouse, funhouse, publishing house, schoolhouse and White House. Thus, allow the students produce some, have them clarify their neologisms to each other: A book house is a house full of books!" ("No, a book house is a house made of books!") (ibid).

Utmost programs of reading ask students to just distribute compounds into component fragments. Furthermore, in that kind of deciphering action, students must also take care about meaning. At the least, they must have the ability to exemplify any endocentric compound, even created words, as in: "A mint berry is a berry that ... smells like mint? tastes like mint? is mint green? The key is...it is a kind of berry, not a kind of mint" (ibid).

Moreover, students must be able to distinguish between compounds in which their understanding may be "figured out" via recognizing the meaning of the component parts, and those that cannot. Besides, examine them through giving them such question, alike "Which one is more truly a kind of box, a shoe box, a voice box or an Xbox?" Arguing how these terms do and/or do not reproduce the conception of "box”, and inspiring critical thinking, is better than a right-wrong mindset (vocablog-plc.blogspot.com/p/compounds).

Obviously, CWs are a tremendous way to assist students enhance their vocabulary in the classroom, e.g. via concentrating on one lead word - such as ache in toothache- and then observing what modernizers may go with. As such, learners from time to time need support with the interrogation of whether compounds are unified, detached or hyphenated, and can be stimulated to use dictionaries to examine this information.

One issue for English language learners of certain L1s is the evidently simple matter of headedness. This might be approached through a consistent noticing exercise (Schmidt 1990), noticing sets of compounds with shared first (gold bug, gold-digger) or second elements (swap shop, workshop).

With an appropriate level of lexical items, such an exercise might be developed quite early in a syllabus to introduce the notion of an NNC and the notion of headedness. The same exercise might be repeated at an advanced level to approach the notion of metaphor through NNCs. A simple picture matching exercise of whatever form; placing pictures around the room that might introduce the terms which might then easily be worked into a text to allow contextualization. Learners would then be able meaningfully to guess what the compound might mean, or if not, figure out that it is probably metaphorical. (languagescholar.leeds.ac.uk/english-compounding-apedagogical-approach).
### Figure 1. Shared first element NNCs versus shared second element NNCs

<table>
<thead>
<tr>
<th>Shared first element</th>
<th>Shared second element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goldfish, goldsmith, [gold-digger]</td>
<td>Worksheet, bedsheet, timesheet, marksheet</td>
</tr>
<tr>
<td>Finger bowl, finger print, finger plaster</td>
<td>Guesthouse, bath house, henhouse [doghouse, madhouse]</td>
</tr>
<tr>
<td>Nightspot, nightshirt, night-light [night owl]</td>
<td>Bullet hole, mousehole, water hole, keyhole, [wormhole]</td>
</tr>
</tbody>
</table>

Compounds can be dealt with in ways which are similar to addressing the teaching of collocation for certain reasons;

a) matching exercises with words from the same field can be beneficial in terms of making them recallable. You can begin by brainstorming things you need for school or work, a holiday, whatever and then go on to focus on compounds with something like:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>note</td>
<td>sharpener</td>
</tr>
<tr>
<td>school</td>
<td>suit</td>
</tr>
<tr>
<td>pencil</td>
<td>coat</td>
</tr>
<tr>
<td>reading</td>
<td>book</td>
</tr>
<tr>
<td>track</td>
<td>book</td>
</tr>
<tr>
<td>lab</td>
<td>glasses</td>
</tr>
<tr>
<td>course</td>
<td>bag</td>
</tr>
</tbody>
</table>

b) Compounds can sometimes be chained and patterned to help people who like graphics (as most of us do).

Learners can be asked to make their own chains starting with certain common components. Start, e.g., with the word *film* and see what compounds you can elicit, teach or get your learners to discover in dictionaries or on-line corpuses. You may get something like:
Then take each outlier in turn and assign one to each group of learners with the task of researching further compounds so they come up for the word *industry* with something like:

Each group gets a different word.

You can of course, repeat the activity with words from a different “daughter” chart *ad infinitum*.

The exercise works well with writing tasks based around the main topic words in the centres of the charts. ([www.eltconcourse.com/training/inservice/teaching/wordformationteaching](http://www.eltconcourse.com/training/inservice/teaching/wordformationteaching)).

**Methodology**

The methodology of the present study is based on a test. An educational test is described by Carroll (1968), using a procedure planned to cause specific behaviour in which one may create interpretations about definite features of an individual. The written test has been
constructed by the researcher. The test falls into two types of questions. The first question has been designed to measure the students’ skill in recognition by responding to (10) items, in a multiple choice exercise. The second question has been designed to measure the students’ skill in production by responding to (10) items, in a gap-filling exercise. The test has been validated through review by a number of Jurors in the field of Linguistics and ELT. A pilot study has been conducted where (20) students were randomly chosen to represent the sample of the study. Reliability has been estimated by adopting Kurder-Richardson method. The test has been administered to (30) students randomly chosen from second year students at the Department of English in the College of Education/Ibn-Rushd for the academic year 2016-2017, to respond to the test. The items of the test have been analyzed to estimate the difficulty level or (facility value) and the discriminating power of each item. Calculations have shown that the discrimination power has been varied from (0.20 and above). In sum, the results have come to reject the null hypothesis and prove positively the students’ ‘recognition and production of compounding’.

Conclusions

The study has investigated the process of compounding as one of the most productive of word-formation processes. The study has tackled the main features of compounds regarding kinds, meanings and interpretations of compounds. The study has shown that the sample of the study has been able to recognize the compound words, and to produce compounds.

The study has shed the light on the pedagogical implications of reviewing certain ways of introducing compounds to students, to overcome the difficulties involved with teaching compounding. The study has recommended that teaching compounding should be engaged with semantically, because of the difficulties aroused by interpreting the meanings of compounds. Some compounds in English are used metaphorically; therefore, more exercises should be given to students to highlight the metaphorical use of compounds. The fact is that, the more exercises the students are given, the better their perception of compounds will be.
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